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Kenya's school based deworming programme marks 10 years - KBC

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Kenya is celebrating 10 years of the National School-Based Deworming Programme that benefits millions of children annually across counties.

The Programme (NSBDP) which is jointly led by the Ministry of Health and the Ministry of Education with technical support from the global non-profit Evidence Action has to date conducted a total of 9 rounds of school-based deworming treatment, reaching up to 6 million children annually across 27 counties.

Children aged 2-14 years, regardless of their enrollment status, are provided with free deworming treatment by teachers at schools.

The deworming treatment is administered in over 19,000 primary schools and ECD Centres by trained schoolteachers, reaching both enrolled and unenrolled children.

The program has become globally recognized, high-impact model for successful inter-ministerial partnership, and has resulted in millions of Kenyan children growing up without having experienced worm infection.

A study conducted by the Kenya Medical Research Institute (KEMRI) revealed that the program has been highly effective in reducing worm infections. According to the study, the prevalence of soil-transmitted helminths (STH) decreased by 62pc amongst children sampled in the survey

Treatment is conducted in at-risk areas for two types of parasitic worm infections, soil-transmitted helminths and schistosomiasis, which are neglected tropical diseases that impede children's health and access to education.

Speaking ahead of the National School-Based Deworming Programme 10-year celebration activities, Principal Secretary, Early Learning and Basic Education, at the Ministry of Education, Dr. Julius Jwan says, "Research shows that if deworming is not done, there is up to 25 per cent absenteeism by learners, something which greatly affects their overall performance."

The National School-Based Deworming Programme is a Kenya Vision 2030 flagship program which has provided over 52 million treatments to school-going children over nine years.

After a disruptive COVID year in 2020, the program resumed full-scale operations and dewormed over 6.4 million children in 2021 across 21counties.

"In addition to us allocating funds for deworming, we are also going further to ensure that all the resources of the government that are directed towards procuring dewormers, go to local manufacturers," said Principal Secretary at the Ministry of Health, Susan Mochache.

This year, the NSBDP aims to achieve deworming across 17 counties and 112 sub-counties, targeting 5.7 million children.

The Ministry of Health is procuring a record 5.9 million Albendazole tablets for the treatment.

Since 2009, the program has consistently treated over 6 million children in the targeted age bracket, in both public and private primary schools and Early Childhood Development. All children in targeted areas, regardless of their enrollment status, are able to receive treatment for free.

Rigorous data and research underpin the NationalSchool-Based Deworming Programme rationale, design, and treatment strategy: studies conducted from as early as the 2000s in Kenya by Nobel Laureate Michael Kremer and Professor

Ted Miguel found that regular deworming can help reduce school absenteeism by up to 25pc.

Endemic areas

The Kenya Medical Research Institute (KEMRI) closely monitors the NSBDP, tracking its impact on worm prevalence rates across endemic areas.

Programme impact data released by KEMRI shows a decrease in the prevalence of Soil-transmitted helminthiasis (STH) and S. haematobium have experienced a substantial reduction in prevalence over the course of the programme while S. mansoni has remained low.

Prevalence surveys have been conducted at baseline (2012), midline (2015) endline (2017), and follow-up (2018) estimating the overall prevalence of any STH to shift from 33.6pc, 18.6pc, 15.2pc, and 12.9pc over the course of the programme.

S. haematobium has been estimated at 14.8pc, 6.8pc, 2.4pc, and 0.3pc while S. mansoni 2.1pc, 1.5pc, 1.7pc and 2.2pc over the same time periods.

After six rounds of MDA, the prevalence of STH has significantly declined among both PSAC and SAC, however, the prevalence of moderate and heavy intensity infections for both classes of parasite are yet to decrease below 2pc, the point at which they are no longer considered a public health problem. The programme has been highly effective, contributing to a reduction of 60pc in the total number of people infected with any STH and 97.9% for S. haematobium.

“Ensuring that no primary schooling is lost because of worm infections that pose a serious threat to the health, education and productivity of children, remains an urgent challenge that deworming can help solve,” said Chrispin Owaga, Evidence Action Country Director – Kenya.

In countries where Evidence Action supports deworming, the average cost per child per treatment was Ksh35 in 2021 and has routinely been at or below Ksh50 throughout the last several years, a testament to the cost-effectiveness and sustainability of these efforts, and what remains a top priority for scaling evidence-based programmes into the next decade.

Over 6 million children in Kenya are at risk of parasitic worm infection. Worm infection inhibits children's uptake of nutrients and can cause malnutrition, diarrhoea, anaemia, and compromised immunity.

Randomized evaluations conducted by global development economists have shown that deworming primary school children can improve their cognition, physical development and school attendance while increasing Kenya Certificate of Primary Education pass rates among girls.

The impact of deworming on children goes beyond health and education outcomes. A new landmark study published in 2021 by a team of economists, led by Edward Miguel and Nobel laureate Michael Kremer, offers new evidence of the long-term benefits of school-based deworming.

According to the study, which followed a group of Kenyan students every 5 years over a 20-year period, receiving two to three additional years of deworming increased their income by 13pc and consumption by 14pc decades after treatment.

An extra two to three years of deworming treatments in school also significantly increased the odds (by 9pc) of working outside of agriculture and in urban areas, which presents more opportunities for jobs that largely pay better and offer more opportunities for growth.

The study also calculates that the investment in deworming Kenya's children has so far had a 37 annualized rate of return.

School-based deworming is widely recognized as the most cost-effective and efficient way to reach at-risk children in countries where school enrollment rates are high and these efforts need to continue to avoid bounceback and maintain high impact towards elimination efforts.

To sustain the gains that have been made over the years, increased government commitment, including domestic financing will be the cornerstone for program sustainability in the next phase.

The NSBDP is already benefiting from local procurement of deworming medicines at the cost of about Ksh70 Million annually.

Additionally, in 2022 the programme is mainstreaming data into NEMIS and DHIS by having schools report health-related data to the Kenya Health InformationsSystems Portal. This showcases the unique inter-ministerial collaboration between the Ministry of Health and the Ministry of Education towards programme sustainability.

The treatment strategy for the next five years will be informed by parasitological impact surveys currently underway, which will reflect the latest prevalence rates across the country. These will be used to update the treatment strategy and geography in accordance with WHO guidelines.

Why deworm

Deworming treatment leads to significant weight gains and allows more energy to be focused on child growth and development. A study in Uganda, for example, found that deworming treatment increased child weight by 10pc for children who received treatment twice per year, and by 5pc for children who received treatment annually.

School-based mass deworming has also been shown to reduce school absenteeism more cost-effectively than alternative ways of boosting school

attendance.

In Kenya, school-based mass deworming reduced school absenteeism by 25pc for those in treatment schools. Furthermore, deworming has spillover effects for untreated school-age and preschool children.

In Kenya, young siblings of those treated, as well as children who lived nearby treatment schools but were too young to be dewormed, showed gains in cognitive development equal to half a year of schooling when evaluated 10 years later.

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